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Appl. No. 10/627,460

Amdt. Dated January 12, 2005

Reply to Office Action of December 21, 2004

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph #0004 as follows:

--What is currently needed are techniques for employing QDIP technology in focal plane array applications, where one or more colors can be detected. In addition, techniques for hybridizing QDIP arrays to supporting electronic circuitry (e.g., such as CMOS read-out circuitry) are needed.--

Please amend paragraph #0016 as follows:

-- Figure ~~3b~~ 3c is a side view structural diagram of the two-color QDIP array shown in Figures 3a and 3b.--

Please amend paragraph #0039 as follows:

-- In this example, the interconnect bumps are In, the metal contacts are Au, and the conductors electrically and mechanically coupling the contact to the interconnect bumps are palladium. In this sense, the metal contacts are adapted to a common planar surface to enable bump-bonding. The contact layers can each be an n-GaAs layer. The barrier and etch stop layers can each be AlGaAs ~~an~~ layer, and the substrate can be a GaAs or other infrared transparent substrate material. The quantum dots of the QD layers ~~and~~ can be InAs in GaAs. Other configurations will be apparent in light of this disclosure, and the present invention is not intended to be limited to any one such embodiment.--

Please amend paragraph #0048 as follows:

--Techniques using QDIP technology to form imaging focal plane arrays capable of sensing one or more colors are disclosed. Hybridizing such QDIP arrays to supporting electronic circuitry (e.g., such as CMOS read-out circuitry) enables the generation of an IR image that could be used for applications such as surveillance, night vision, and search and rescue operations.--